

Psychological Management by Family Physicians

Mark Olfson, MD; Myrna M. Weissman, PhD; Andrew C. Leon, PhD; Edmund S. Higgins, MD; James E. Barrett, MD; and Robert S. Blacklow, MD

New York, New York; Charleston, South Carolina; Hanover, New Hampshire; and Rootstown, Ohio

Background. It is frequently assumed that primary care physicians seldom provide psychological interventions to their patients with mental health problems. This study examines self-reports of psychological interventions by family physicians.

Methods. Primary care patients (N=937) completed a mental health screening form immediately prior to their medical visit. Results were withheld from their seven respective physicians. Following the visit, the physicians were asked to classify the range of psychological interventions they used to manage their patients' emotional problems during the visit. A structured psychiatric diagnostic interview was subsequently administered to a subgroup of the patients (n=388).

Results. At least one psychological intervention was provided to nearly one fourth (24.1%) of the patients. The interventions included listening to the patient's emotional problems (22.4%), providing advice (19.0%), discussing the patient's mental disorder diagnosis (11.4%),

and providing individual counseling (8.4%) or family counseling (0.6%). Two thirds (66.7%) of the patients who reported that their emotional health was poor received at least one of these psychological interventions. In a multivariate model, the likelihood of receiving a psychological intervention was higher for patients who were separated or divorced; those between 45 and 59 years of age; those with less than a college education; those who received disability payments; those who reported poor emotional health; and those who had a positive screening result for panic disorder, major depressive disorder, or obsessive-compulsive disorder.

Conclusions. Primary care physicians may be far more extensively involved in providing psychological interventions than is commonly assumed.

Key words. Mental health; mental disorders; primary health care; family physicians; family medicine; counseling. (*J Fam Pract* 1995; 41:543-550)

Considerable attention has been devoted to the role of primary care physicians in the provision of ambulatory mental health care. Interest in this area has been fueled by the observation that more patients with mental disorders are cared for in the general medical sector than in the mental health sector.^{1,2} While researchers have devoted considerable effort to measuring the extent of psychopathology in primary care³⁻⁵ and to assessing the diagnostic

skills⁶⁻⁸ and prescribing practices⁹⁻¹¹ of primary care physicians, less attention has been given to the routine psychological management of mental disorders in primary care. Important gaps remain in our understanding of the extent, range, and appropriateness of psychological interventions provided by primary care physicians.

A common stereotype of the primary care physician is a harried and overworked practitioner who focuses more on the pharmacologic than the psychological dimensions of patient care.¹² Support for this generalization comes from the finding that, as compared with psychiatrists, primary care physicians spend considerably less time with their mentally ill patients and write more prescriptions for psychotropic medications per patient visit.^{13,14}

In office-based practice, primary care physicians are more than twice as likely to prescribe a psychotropic medication than to provide psychotherapy for emotional

Submitted, revised, September 28, 1995.

From the Department of Psychiatry, College of Physicians and Surgeons of Columbia University (M.O., M.M.W.), New York State Psychiatric Institute (M.O., M.M.W.), and Cornell University Medical College (A.C.L.), New York, New York; the Medical University of South Carolina, Charleston (E.S.H.); Dartmouth Medical School, Hanover, New Hampshire (J.E.B.); and Northeastern Ohio Universities College of Medicine, Rootstown (R.S.B.). Requests for reprints should be addressed to Mark Olfson, MD, College of Physicians and Surgeons of Columbia University, 722 West 168th St, New York, NY 10032.

problems.¹⁵ A national household survey revealed that only 4.7% of psychotherapy visits are provided by nonpsychiatrist physicians.¹⁶ Because these studies focused on psychotherapy, they may have missed a range of other psychological interventions that are often provided in primary care practice. Primary care physicians may commonly rely on less formal verbal interventions, such as providing practical advice, offering reassurance, and teaching patients that their current symptoms are a reaction to a stressful life event.¹⁷

According to a national survey, family physicians report using some type of psychological intervention in roughly two thirds of the patients who they believe have a significant psychiatric disorder.¹⁸ This therapy consists almost exclusively of supportive problem solving, advice, and reassurance rather than formal psychotherapy. These survey results suggest that psychological interventions may be far more common in primary care than is generally assumed. In support of this view, primary care physicians also report spending more time with their depressed patients than they do with their other patients.¹⁴

In the current study, we describe the extent to which a variety of informal psychological interventions, such as listening to emotional problems and offering advice, are provided during the course of routine practice. We also examined patient sociodemographic as well as functional and clinical characteristics that predict who receives these psychological interventions.

Methods

The study was conducted during the spring and summer of 1992 at three private primary care practices in cooperation with the Departments of Family Medicine and Psychiatry at Brown University School of Medicine in Providence, NJ. One of the practices had the equivalent of 2.5 full-time physicians, one had two full-time physicians, and one had two full-time physicians and two nurse practitioners. None of the practices were engaged in on-site teaching of medical students or interns and residents at the time of the study, and all the physicians were board-certified in family practice.

The data were collected as part of a study to validate a screening and diagnostic system for mental disorders in primary care: the DSM-III-R Symptom-Driven Diagnostic System for Primary Care (SDDS-PC) (The Upjohn Co, Kalamzoo, Mich). The methods, primary objectives, and general characteristics of the patient population are described elsewhere.¹⁹

Study Population

Consecutive new and continuing patients who were between 18 and 70 years of age and could read and write English were invited to participate in the study. Patients who were coming for prenatal visits and those who were not scheduled to have face-to-face contact with their physician were excluded.

Of 2262 patients who met initial criteria for inclusion in the study, 1360 were approached to participate in the study. The remainder were excluded because of rapid patient flow ($n=709$) or because they left before being seen ($n=193$). Of the 1360 patients who were asked to participate, 940 (69.1%) consented and completed the screening form. Physician questionnaires were completed for 937 of these patients.

Patient Screening Form

While waiting to see their physician, patients were asked by a research assistant to complete a questionnaire that probed basic sociodemographic data, role functioning, and mental health symptoms. The mental health symptoms included an abbreviated 18-item version of the Center for Epidemiology Studies Depression Scale (CES-D)²⁰ and the SDDS-PC screen for multiple mental disorders.¹⁹ The validity of the SDDS-PC screen as a first instrument to help identify common mental disorders in primary care has been previously discussed in the literature.¹⁹

Information was also collected on each patient's use of mental health services during the past month, psychotropic medications, medical services, as well as physical and emotional health.

Physician Questionnaire

Following completion of the screening form, each patient was provided routine medical care by his or her primary care physician. At the end of the visit, the physician was asked to complete a brief questionnaire that asked the physician to assess the patient's overall emotional health, whether the patient had an emotional problem, and if so, what kind. For cases in which the physician thought the patient had an emotional problem, the physician was asked to select from a list the interventions provided to manage the emotional problem. This list included five types of psychological intervention (listening to emotional problems, providing advice about emotional problems, discussing a possible mental disorder diagnosis with the patient, counseling the patient, and counseling the patient's family); five types of referral for specialty care (psychiatrist, psychologist, neurologist, substance abuse

program, and other); and three types of psychotropic medication (minor tranquilizers and hypnotics, antidepressants, and other psychotropic medications).

Diagnostic Criteria

A subset of consenting patients received a face-to-face structured diagnostic interview to determine whether they met criteria for five mental disorders defined in the *Diagnostic and Statistical Manual for Psychiatric Disorders, Third Edition, Revised* (DSM-III-R).²¹ This interview, the Structured Clinical Interview for DSM-III-R, version P (SCID-P),^{22,23} was administered by trained mental health professionals.¹⁹ The interviews were scheduled for no later than 2 weeks following the medical visit. A comparison of patients who received and did not receive the SCID-P revealed no significant differences in age, sex, or education. However, nonwhite patients (27%) were significantly less likely to be interviewed than were whites (40%) ($P=.007$). In addition, single persons were less likely to receive a SCID-P interview (34%) than were married persons (43%) ($P=.03$).¹⁹

Statistical Analysis

Between-group comparisons on categorical variables were made with the χ^2 test. The strength of linear relationships between pairs of variables was assessed with the Pearson product-moment correlation (r), and comparisons between correlation coefficients was made with Fisher's z transformation. A logistic regression was conducted to examine the strength of the association between various demographic and clinical variables and receipt of psychological management. Statistical significance was defined as a two-tailed alpha of .05.

Results

Mental Health Interventions

Table 1 presents the frequencies with which the physicians provided a range of interventions to manage emotional problems during the index medical visit. Patients were more than four times as likely to receive some form of psychological management (24.1%) than a psychotropic medication (5.1%) and more than six times as likely to receive psychological management than a referral for specialty care (3.5%). In a separate analysis, it was revealed that 13.7% of the patients who received psychological management also received a psychotropic medication, and 14.2% of those receiving psychological management were also referred for specialty care.

Table 1. Mental Health Interventions in a Primary Care Sample (N=937)

| Intervention | % of Patients Receiving Intervention* |
|---|---------------------------------------|
| Psychological management | 24.1 |
| Listened to problems | 22.4 |
| Gave advice | 19.0 |
| Discussed possible diagnosis with patient | 11.4 |
| Counseled patient | 8.4 |
| Counseled family | 0.6 |
| Referral | 3.5 |
| Psychiatrist | 0.6 |
| Psychologist | 1.5 |
| Other mental health professional | 1.2 |
| Alcoholics Anonymous | 0.4 |
| Substance abuse program | 0.4 |
| Psychotropic medication | 5.1 |
| Antidepressant | 3.9 |
| Minor tranquilizer | 0.4 |
| Other | 0.9 |
| Psychiatric hospitalization | 0.1 |

*Physicians were allowed to endorse more than one intervention for each patient.

Sociodemographic Characteristics

Table 2 presents the rate of psychological management among various sociodemographic groups. Psychological management was significantly more commonly provided to separated or divorced patients as compared with married,

Table 2. Rates of Psychological Management for Selected Sociodemographic Groups

| Sociodemographic Group | Number of Patients in Group | Rate of Psychological Management, % | P Value† |
|------------------------------|-----------------------------|-------------------------------------|----------|
| Sex | | | NS |
| Female | 673 | 23.6 | |
| Male | 264 | 25.4 | |
| Age, y | | | .03 |
| 18-29 | 271 | 21.4 | |
| 30-44 | 369 | 24.1 | |
| 45-59 | 220 | 30.9 | |
| 60-70 | 76 | 21.1 | |
| Race | | | NS |
| White | 910 | 24.2 | |
| Nonwhite | 22 | 18.2 | |
| Marital status | | | .01 |
| Never married | 210 | 19.5 | |
| Married | 611 | 23.7 | |
| Separated/Divorced | 76 | 38.2 | |
| Widowed | 29 | 31.0 | |
| Education | | | <.001 |
| High school graduate or less | 304 | 28.2 | |
| Some college | 228 | 31.1 | |
| College graduate | 387 | 17.1 | |

*Psychological management includes providing advice, counseling patient or family, listening to emotional problems, and discussing possible mental disorder diagnosis with the patient.

†P values obtained using the χ^2 test.

never married, or widowed patients ($\chi^2=8.8$, $P=.003$), those who had not graduated college ($\chi^2=18.9$, $P<.001$), and patients who were 45 to 59 years of age ($\chi^2=7.2$, $P=.007$). No significant differences in the rate of psychological management were observed between male and female patients or between whites and nonwhites.

Role Functioning and Treatment History

Increased rates of psychological management were found across a range of measures of impaired patient functioning. The likelihood of receiving psychological management was significantly increased among patients who reported having missed work or school because of a mental health problem during the month prior to the medical visit (Table 3). Provision of psychological management was also increased among patients who reported that they did not get along well with their spouse or partner and those who stated that they did not have enough money to care for themselves (Table 3). Approximately one half (53.6%) of the patients who received disability benefits and fully two thirds (66.7%) who reported that their emotional health was poor received psychological management from their primary care physician during the index medical visit.

Table 3. Rate of Psychological Management by Patient Function and Treatment History

| Variable | No. of Patients in Group* | Rate of Psychological Management, † % | P Value‡ |
|---|---------------------------|---------------------------------------|----------|
| Function | | | |
| Missed work due to mental health problem (past month) | 96 | 43.8 | <.001 |
| Got along not well or poorly with spouse or partner (past month) | 62 | 33.9 | .04 |
| No visits with friends or relatives (past month) | 26 | 38.5 | NS |
| Not enough money to care for self and family (past month) | 148 | 31.1 | .03 |
| Receiving financial disability payments (current) | 28 | 53.6 | <.001 |
| Self-assessed poor emotional health (past month) | 39 | 66.7 | <.001 |
| Treatment history | | | |
| Visited mental health specialist (past month) | 100 | 50.0 | <.001 |
| Admitted to hospital for mental health/substance abuse (lifetime) | 47 | 48.9 | <.001 |
| Taken prescribed psychotropic medications (past month) | 107 | 45.8 | <.001 |

*Total number of patients varies from 937 to 925, except for spouse item, in which the total number was 774.

†Psychological management includes providing advice, counseling patient or family, listening to emotional problems, and discussing possible mental disorder diagnosis with the patient.

‡P values obtained using the χ^2 test.

Previous mental health treatment was also associated with increased rates of psychological management. Provision of psychological interventions was increased among patients who reported that they had been previously hospitalized for a mental health or substance abuse problem, reported recent visits to mental health specialist, or had taken a prescribed psychotropic medication during the past month (Table 3).

Psychiatric Disorder

Approximately one half of the patients who received the SCID-P and met DSM-III-R criteria for major depressive disorder or obsessive-compulsive disorder and two thirds of those who met alcohol abuse/dependence or panic disorder criteria received psychological management (Table 4). The rate of psychological management was also significantly higher among patients who were positive for all four of these conditions on the SDDS-PC screening questionnaire. A SCID-P diagnosis of generalized anxiety disorder was not associated with psychological management. In previous research, a score of 16 or above on the full 20-item CES-D has been used to screen for depressive disorder in community samples.²⁴ In the current study patients who scored 16 or higher on the 18-item CES-D ($n=143$) were more likely to receive a psychological intervention (45.5%) than were those who had lower scores (20.0%) ($\chi^2=42.2$, $P<.001$).

Table 4. Rate of Psychological Management by SCID-P Diagnosis and Result on SDDS-PC Screen

| Condition by Diagnostic or Screening Measure | No. of Patients with Condition | Rate of Psychological Management,* % | P Value† |
|--|--------------------------------|--------------------------------------|----------|
| SCID-P diagnosis (n=388) | | | |
| Alcohol abuse or dependence | 12 | 66.7 | .001 |
| Generalized anxiety disorder | 12 | 25.0 | NS |
| Major depressive disorder | 61 | 52.5 | <.001 |
| Obsessive-compulsive disorder | 9 | 55.6 | .04 |
| Panic disorder | 27 | 66.7 | <.001 |
| SDDS-PC screen result (N=937) | | | |
| Alcohol abuse or dependence | 34 | 47.1 | .001 |
| Generalized anxiety disorder | 443 | 33.4 | <.001 |
| Major depressive disorder | 299 | 37.5 | <.001 |
| Obsessive-compulsive disorder | 262 | 35.9 | <.001 |
| Panic disorder | 218 | 41.7 | <.001 |

*Psychological management includes providing advice, counseling patient or family, listening to emotional problems, and discussing possible mental disorder diagnosis with the patient.

†P values obtained using the χ^2 test.

SCID-P denotes Structured Diagnostic Interview for the DSM-III-R; SDDS-PC (The Upjohn Co, Kalamazoo, Mich), Symptom-Driven Diagnostic System for Primary Care.

Table 5. Logistic Regression Analysis of Risk Factors for Provision of Psychological Management in Primary Care (N=851)

| Risk Factor (Reference Group) | Odds Ratio (95% CI) |
|--|---------------------|
| Demographic variables | |
| Age of patient (40 to 59 y) | 2.11 (1.43–3.10)* |
| Sex of patient (male) | 1.32 (0.89–1.94) |
| Race of patient (white) | 1.59 (0.47–5.39) |
| Marital status of patient (separated/divorced) | 1.82 (1.02–3.26)* |
| Education of patient (less than college) | 1.92 (1.33–2.78)* |
| Role functioning | |
| Missed work for emotional reasons (present) | 1.55 (0.91–2.67) |
| Problems getting along with partner (present) | 0.82 (0.48–1.41) |
| Visits with family and friends (absent) | 0.74 (0.28–1.92) |
| Disability payments (present) | 2.93 (1.17–7.33)* |
| Emotional health (poor) | 2.95 (1.30–6.72)* |
| SDDS-PC screen positive result† | |
| Panic disorder | 1.94 (1.28–2.94)* |
| Alcohol abuse/dependence | 1.87 (0.84–4.36) |
| Obsessive-compulsive disorder | 1.51 (1.01–2.25)* |
| Major depressive disorder | 1.54 (1.02–2.32)* |

*Lower bound of confidence interval exceeds 1.00.

†SDDS-PC (The Upjohn Co, Kalamazoo, Mich) denotes Symptom-Driven Diagnostic System for Primary Care.

NOTE: psychological management includes providing advice, counseling patient or family, listening to emotional problems, and discussing possible mental disorder diagnosis with the patient.

Assessments of Emotional Health

Most patients reported that their emotional health was either excellent (28.9%) or good (47.7%), rather than fair (19.5%) or poor (3.9%). Approximately two thirds of the patients who rated themselves as in poor emotional health were judged to be in either fair (35.3%) or poor (32.4%) emotional health by their physicians.

The correlation between the physician's and patient's rating of patient emotional health was significantly higher among the group who received ($r=.419$) psychological management than among the group who did not receive ($r=.197$) psychological management ($z=3.22$, $P<.001$).

An Explanatory Model of Psychological Management

A logistic regression analysis was conducted to examine the association between provision of psychological management and patient demographic characteristics, role functioning, and clinical symptoms (Table 5). The hypothesized explanatory variables included patient age, sex, race, marital status, education, missing work for emotional reasons, problems getting along with partner, visits with family or friends during the past month, disability

payments, overall emotional health, and positive result on the SDDS-PC screen for major depression, panic disorder, alcohol abuse/dependence, or obsessive-compulsive disorder. In this model, the likelihood of receiving some form of psychological management was significantly elevated for patients who were between 40 and 59 years of age, were separated or divorced, had less than a college education, were receiving disability payments, perceived themselves to be in poor emotional health, or had a positive screening result for panic disorder, major depressive disorder, or obsessive compulsive disorder. The measures of marital distress and impaired occupational functioning were not significantly associated with utilization of a psychological intervention.

Discussion

In the current report, psychological rather than pharmacologic management was the most common form of primary care treatment for emotional problems. More than four times as many patients received a verbal intervention as received a psychotropic medication. Similar results have been reported from a national survey of family practitioners.¹⁶ In that survey, more than one half (58%) of the physicians reported providing a psychological intervention to a majority of the patients they had perceived as having significant psychiatric problems, while only 10% of physicians reported providing drug treatment as frequently to such patients.

In evaluating the high prevalence of psychological interventions in primary care, it is important to consider the degree to which these interventions are matched to patient needs. We found that the likelihood of receiving a verbal intervention was closely tied to the patients' independent assessment of their own emotional health. Fully two thirds of the patients who rated themselves as in poor emotional health received a psychological intervention from their primary care physician. In the subset of our sample who had a structured psychiatric diagnostic interview following the medical visit, two thirds who met criteria for panic disorder or alcohol abuse/dependence and approximately one half who met criteria for major depressive disorder or obsessive-compulsive disorder received some type of psychological intervention. Higher rates of psychological intervention were also associated with several measures of functional impairment as well as patient age, marital status, and educational status.

These findings suggest that the patients who were selected for psychological interventions were under significant psychological distress. At the same time, a significant number of patients who met diagnostic criteria for a psychiatric disorder did not receive a psychological inter-

vention. In evaluating these findings, it is important to bear in mind that the specific clinical indications for brief psychological treatments have not been well established. For this reason, it is not possible to assess the appropriateness of the care that was actually provided.

For patients receiving a psychological intervention, there was close agreement between the physician's and patient's assessment of the patient's general emotional health. This suggests that physicians who take time to listen and respond to their patient's personal problems may be able to develop a more accurate assessment of the patient's emotional status. In previous research, physicians trained to probe psychological issues have been shown to uncover a greater number of psychiatric symptoms and to make more accurate diagnoses than their colleagues who did not receive the training.²⁵⁻²⁷ In the current study, increased attention to psychological problems may help explain the association between physician intervention and improved assessment. Alternatively, when physicians understand their patients' emotional health, they may be more likely to provide a psychological intervention.

The question remains whether such extensive reliance on informal verbal interventions represents effective care. Unfortunately, very little is known about which brief psychological management strategies are effective for which patients. In general terms, some evidence indicates that teaching physicians better interviewing techniques reduces the psychiatric symptoms of their emotionally distressed patients.^{28,29} In one recent study, a majority of primary care patients who had recently received a prescription for an antidepressant reported that their physician used a cognitive behavioral technique and that recognition of these interactions was associated with greater adherence to the prescribed antidepressant.³⁰ Some data further suggest that "clinical management" that includes an assessment of psychiatric symptoms, encouragement, support, and advice³¹ may be helpful in the treatment of mild depressive disorders.³²

The time-intensive nature of more formal psychotherapy makes this mode of treatment simply infeasible in most primary care practices where the average office visit is less than 20 minutes.³³ For this reason, it is important to define and distinguish conditions with a high likelihood of responding to brief psychological treatments from those that require more time-intensive specialized care. Stuart and Lieberman¹⁷ have developed such a model. Their brief (15-minute) psychological intervention involves asking questions concerning the patient's background state, affect, current troubles, and handling or management of these troubles together with empathic statements that express the physician's concern for the

patient. Research is needed to evaluate the effectiveness of such intervention strategies.

The current findings are constrained by several limitations in the data. The significant rate of patient refusal to participate raises the possibility that the study sample was not representative of the three practices with respect to mental health status and treatment. Specifically, recruitment may have been more efficient when the practices were less busy and the physicians had a greater opportunity to provide psychological interventions. Second, the interrater reliability of the various psychological interventions is unknown. For example, an intervention that one physician might label "advice," another physician might label "counseling." Third, the completion of a mental health screening form prior to the medical visit and physician awareness of the general purpose of the study may have prompted patients to report more psychiatric symptoms or physicians to engage in a greater number of psychological interventions than would have occurred under typical practice conditions. Fourth, and perhaps most important, the study was conducted with a small number of university-affiliated physicians treating a rather affluent and well-educated patient population who completed a mental health screening form immediately prior to the patient visit. It is not known whether similar results would have been obtained with a different patient population in a different treatment setting.

Beyond direct interventions from the primary care physician, several models have been developed for linking specialized mental health services to primary care practice.³⁴⁻³⁶ One approach relies on nurses who have been trained in interpersonal counseling.³⁷ Under such an arrangement, the physician can refer patients who do not respond to routine clinical management for more extensive psychological counseling within the primary care setting. A more complicated and ambitious strategy places an entire multidisciplinary mental health treatment team in the primary care practice.³⁸ Ultimately, the successful integration of specialized services into primary care will require an understanding of the strengths and limitations of the psychological interventions routinely provided by primary care physicians.

Conclusions

We report evidence that family physicians in three private practices provide some form of psychological management to approximately one fourth of their patients. The likelihood of receiving these interventions was closely tied to several measures of psychiatric symptoms and functional impairment. These findings suggest that primary care physicians may be far more commonly involved in the

psychological dimensions of patient care than is generally assumed.

Much remains to be learned about the psychological management of mental and emotional problems in primary care. While the current findings suggest that family physicians play an important role in the delivery of psychological services, research is needed to better understand the composition, quality, and quantity of psychological care that is provided in routine primary care practice. More important, work is needed to determine which simple psychological techniques delivered by family physicians are most effective for their patients with common mental conditions.

Acknowledgments

This study was funded by The Upjohn Company, Inc.

Gerald L. Klerman, MD, was the initial principal investigator of this project until his death in April 1992, at which point W. Eugene Broadhead, MD, PhD, became the principal investigator. Don Buesching, PhD, George Gross, and James Coleman of the Upjohn Company provided technical assistance throughout the project.

The authors thank Drs David Carter, Colleen Cleary, Ira Warshaw, Margaret Lytton, Margaret Tryforos, Arthur Frazzano, Gary Cummins, Larry Culpepper, Vincent Hunt, Martin Keller, and Ms. Christina Provencal for their assistance with this project.

References

- Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto US mental and addictive disorders service system: Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry* 1993; 50:85-94.
- Regier DA, Goldberg ID, Taube CA. The de facto US mental health services system: a public health perspective. *Arch Gen Psychiatry* 1978; 41:934-41.
- Barrett JE, Barrett JA, Oxman TE, Gerber PD. The prevalence of psychiatric disorders in a primary care practice. *Arch Gen Psychiatry* 1988; 45:1100-6.
- Schulberg HC, Saul M, McClelland M, Ganguli M, et al. Assessing depression in primary medical and psychiatric practices. *Arch Gen Psychiatry* 1985; 42:1164-70.
- Von Korff M, Shapiro S, Burke JD, et al. Anxiety and depression in a primary care clinic: comparison of diagnostic interview schedule, general health questionnaire, and practitioner assessments. *Arch Gen Psychiatry* 1987; 44:152-6.
- Ormel J, Koeter MWJ, van den Brink W, van de Willige G. Recognition, management, and course of anxiety and depression in general practice. *Arch Gen Psychiatry* 1991; 48:700-6.
- Kirmayer LJ, Robbins JM, Dworkind M, Yaffe MJ. Somatization and the recognition of depression and anxiety in primary care. *Am J Psychiatry* 1993; 150:734-41.
- Thompson TL, Stoudemire A, Mitchell WD, Grant RL. Underrecognition of patients' psychosocial distress in a university hospital medical clinic. *Am J Psychiatry* 1983; 140:158-61.
- Beardsley RS, Gardocki GJ, Larson DB, Hidalgo J. Prescribing of psychotropic medication by primary physicians and psychiatrists. *Arch Gen Psychiatry* 1988; 45:1117-9.
- Broadhead WE, Larson DB, Yarnall KSH, Blazer DG, Tse CK. Tricyclic antidepressant prescribing for nonpsychiatric disorders: an

analysis based on data from the 1985 National Ambulatory Medical Care Survey. *J Fam Pract* 1991; 33:24-32.

- Olsson M, Klerman GL. Trends in the prescription of psychotropic medications: the role of physician specialty. *Med Care* 1993; 31: 559-64.
- Lemelin J, Hotz S, Swensen R, Elmslie T. Depression in primary care. Why do we miss the diagnosis? *Can Fam Physician* 1994; 40:104-8.
- Schurman RA, Kramer PD, Mitchell JB. The hidden mental health network: treatment of mental illness by nonpsychiatrist physicians. *Arch Gen Psychiatry* 1985; 42:89-94.
- Olsson M, Pincus HA. The treatment of depression: prescribing practices of primary care physicians and psychiatrists. *J Fam Pract* 1992; 35:627-35.
- Jencks SF. Recognition of mental distress and diagnosis of mental disorder in primary care. *JAMA* 1985; 253:1903-7.
- Olsson M, Pincus HA. Psychotherapy in the United States: I. Volume, costs, and user characteristics. *Am J Psychiatry* 1994; 151:1281-8.
- Stuart MR, Lieberman JA. The fifteen minute hour: applied psychotherapy for the primary care physician. 2nd ed. Westport, Conn: Praeger Publishers, 1993.
- Orleans CT, George LK, Houpt JL, Brodie HKH. How primary care physicians treat psychiatric disorders: a national survey of family practitioners. *Am J Psychiatry* 1985; 142:52-7.
- Broadhead WE, Leon AC, Weissman MM, et al. Validation of the SDDS-PC screen for multiple mental disorders in primary care. *Arch Fam Med* 1995; 4:211-9.
- Roberts RE, Vernon SW. The Center for Epidemiologic Studies Depression Scale: its use in a community sample. *Am J Psychiatry* 1983; 140:41-6.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition. Washington, DC: American Psychiatric Association, 1987.
- Spitzer RL, Williams JBW, Gibbon M, First M. The Structured Clinical Interview for DSM-III-R (SCID): I. History, rationale, and description. *Arch Gen Psychiatry* 1992; 49:624-9.
- Williams JBW, Gibbon M, First M, et al. The Structured Clinical Interview for DSM-III-R (SCID): II. Multisite test-retest reliability. *Arch Gen Psychiatry* 1992; 49:630-6.
- Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Meas* 1977; 1:385-401.
- Davenport S, Goldberg D, Millar T. How psychiatric disorders are missed during medical consultations. *Lancet* 1987; 2:439-41.
- Goldberg DP, Jenkins L, Millar T, Faragher EB. The ability of trainee general practitioners to identify psychological distress among their patients. *Psychol Med* 1993; 23:185-93.
- Levinson W, Roter D. The effects of two continuing medical education programs on communication skills of practicing primary care physicians. *J Gen Intern Med* 1993; 8:318-24.
- Roter D, Hall J. Recruitment and training of primary care physicians in interviewing skills to identify and address psychosocial distress. The fifth annual NIMH International Research Conference on Primary Care Mental Health Research: Concepts, Methods and Obstacles. Tysons Corner, Va: Primary Care Research Program, National Institute of Mental Health, 1991.
- Higgins ES. A review of unrecognized mental illness in primary care: prevalence, natural history, and efforts to change the course. *Arch Fam Med* 1994; 3:908-17.
- Robinson P, Bush T, Von Korff M, Katon W, Lin E, Simon GE, Walker E. Primary care physician use of cognitive behavioral techniques with depressed patients. *J Fam Pract* 1995; 40:352-7.
- Fawcett J, Epstein P, Fiester SJ, Elkin I, Autry JH. Clinical management—imipramine/placebo administration manual: the NIMH Treatment of Depression Collaborative Research Program. *Psychopharmacol Bull* 1987; 23:309-24.
- Elkin I, Shea T, Watkins JT, et al. National Institute of Mental Health Treatment of Depression Collaborative Research Program: general effectiveness of treatments. *Arch Gen Psychiatry* 1990; 46: 971-82.

33. Shappert SM. National Ambulatory Medical Care Survey: 1992 Summary. Advance data from Vital and Health Statistics, No. 253. Hyattsville, Md: National Center for Health Statistics, 1994.
34. Ross M, Scott ML. An evaluation of the effectiveness of individual and group cognitive therapy in the treatment of depressed patients in an inner city health centre. *J R Coll Gen Pract* 1985; 35:239-42.
35. Miranda J, Munoz RF. Intervention for minor depression in primary care patients. *Psychosom Med* 1994; 56:136-41.
36. Balestrieri M, Williams P, Wilkinson G. Specialist mental health treatment in general practice: a meta-analysis. *Psychol Med* 1988; 18:711-7.
37. Klerman GL, Budman S, Berwick D, Weissman MM, Daminco-White J, Bemby A, et al. Efficacy of a brief psychosocial intervention for symptoms of stress and distress among patients in primary care. *Med Care* 1987; 25:1078-88.
38. Jackson G, Gater R, Goldberg D, Tantom D, Loftus L, Taylor H. A new community mental health team based in primary care. A description of the service and its effect on service use in the first year. *Br J Psychiatry* 1993; 162:375-84.